

DERWENT-ACC-NO: 1997-017239

DERWENT-WEEK: 199702

COPYRIGHT 2008 DERWENT INFORMATION LTD

TITLE: Prodn of porous carbon@ plate for electrode substrate for  
fuel cell using organic fibre for producing carbon@  
fibre, preparing papered sheets having different bulk  
densities, etc

INVENTOR: HAMU S; IWAKI O ; KANEDA T

PATENT-ASSIGNEE: OJI PAPER CO[OJIP]

PRIORITY-DATA: 1995JP-083798 (April 10, 1995)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE
JP 08283084 A	October 29, 1996	JA

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
JP 08283084A	N/A	1995JP-083798	April 10, 1995

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	C04B38/00	20060101
CIPS	D21H27/30	20060101

ABSTRACTED-PUB-NO: JP 08283084 A

BASIC-ABSTRACT:

Prodn. of a porous carbon plate comprises: (a) using a 20-95 wt. %-organic fibre for producing a carbon fibre having a size of 0.01-30 deniers, and a fibre length of 0.2-15mm and 5-80 wt. %-pulp; (b) preparing at least two kinds of papered sheets having different bulk density, with a bulk density of 0.1-0.5g/cm<sup>3</sup>; (c) impregnating an organic high-molecular substance soln. in the papered sheets; (d) drying the sheets to prepare dried sheets; (e) laminating the impregnated sheets in the order of lower bulk density between the impregnated sheet prepared from papered sheet having the highest bulk density to prepared a laminated sheet; (f) heat pressing the laminated sheet, (g)

applying oxidation treatment in air to the laminated sheet to prepare a precursor sheet; (h) applying heated carbonisation treatment at at least 800 °C under an inert gas atmos. to the precursor sheet.

USE - The porous carbon plate is used in an electrode for a fuel cell at lower costs.

ADVANTAGE - The porous carbon plate has pore dia. gradient, by means of conventional sheet formation facility used in the paper making method, or a conventional impregnated sheet formation facility used in the impregnation method. The porous carbon plate has high electric conductivity, superior chemical resistance. Providing pore dia. gradient to the porous carbon plate changes no apparent density or flexural strength. The portion having the large pore dia. contains large amts. of a phosphoric acid electrolyte, and has good gas permeability. The portion having the small pore dia. has high holding performance for the phosphoric acid electrolyte.

TITLE-TERMS: PRODUCE POROUS CARBON@ PLATE ELECTRODE  
SUBSTRATE FUEL CELL ORGANIC  
FIBRE PREPARATION PAPER SHEET BULK DENSITY

DERWENT-CLASS: A85 F09 L03

CPI-CODES: A12-E06A; F01-D09A; F04-G; L03-E04B;

ENHANCED-POLYMER-INDEXING:

Polymer Index [1.1]

018 ; H0328; M9999 M2108 M2095; L9999 L2391; L9999 L2108 L2095; M9999 M2437\*R; L9999 L2437\*R;

Polymer Index [1.2]

018 ; ND01; ND07; Q9999 Q7341 Q7330; Q9999 Q7409 Q7330; K9892; K9676\*R; K9574 K9483; N9999 N6042\*R; N9999 N6780\*R N6655; Q9999 Q7818\*R; N9999 N7192 N7023; B9999 B5527 B5505; B9999 B3269 B3190; B9999 B5221 B4740; B9999 B4580 B4568; B9999 B4091\*R B3838 B3747; B9999 B4875 B4853 B4740; B9999 B4842 B4831 B4740; B9999 B4148 B4091 B3838 B3747; N9999 N6177\*R;

Polymer Index [1.3]

018 ; D00 D09 C\* 4A R05086 200716; A999 A419; S9999 S1070\*R; B9999 B5254 B5243 B4740;

Polymer Index [2.1]

018 ; P0000; M9999 M2108 M2095; L9999 L2391; L9999 L2108 L2095; A999 A419; A999 A782; S9999 S1070\*R;

Polymer Index [2.2]

018 ; B9999 B5254 B5243 B4740;